



Seasonality of infectious diseases

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Abstract:

Seasonality, a periodic surge in disease incidence corresponding to seasons or other calendar periods, characterizes many infectious diseases of public health importance. The recognition of seasonal patterns in infectious disease occurrence dates back at least as far as the Hippocratic era, but mechanisms underlying seasonality of person-to-person transmitted diseases are not well understood. Improved understanding will enhance understanding of host-pathogen interactions and will improve the accuracy of public health surveillance and forecasting systems. Insight into seasonal disease patterns may be gained through the use of autocorrelation methods or construction of periodograms, while seasonal oscillation of infectious diseases can be easily simulated using simple transmission models. Models demonstrate that small seasonal changes in host or pathogen factors may be sufficient to create large seasonal surges in disease incidence, which may be important particularly in the context of global climate change. Seasonality represents a rich area for future research.

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Resource Description

Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Climate Change and Human Health Literature Portal

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: General Infectious Disease

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology:

type of model used or methodology development is a focus of resource

Methodology, Other Projection Model/Methodology

Other Projection Model/Methodology: discussion only

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content